

**REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**EXECUTIVE OFFICER SUMMARY REPORT**

**JUNE 12, 2019**

**ITEM 7**

**SUBJECT**

SmartCover System Deployments. *(Sarah Mearon)*

**STAFF RECOMMENDATION**

Information item only; no recommendation.

**KEY ISSUES**

Any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system, whether or not it reaches surface water, is a sanitary sewer overflow or SSO. SSOs contain high concentrations of toxic pollutants, nutrients, pathogens, and suspended solids. SSOs that reach surface waters can adversely affect water quality and beneficial uses, commonly leading to beach closures. Additionally, human exposure to SSOs may result in adverse health effects. Accordingly, prevention of SSOs is a high priority for the San Diego Water Board, as well as for the numerous water agencies in the San Diego Region.

The SmartCover System provides real-time measurements of water level, flow, and other parameters in sanitary sewers. Water agency general managers attest that with at least an hour of warning before a sewer spill, agencies can dispatch a crew to clear out most sewer blockages. Identification of this "golden hour" is done by sampling water levels frequently and transmitting an alarm by radio technology in real time. In this way sewer backups do not become spills.

**PRACTICAL VISION**

This item is consistent with Chapter 2 of the Practical Vision, Monitoring and Assessment, which aims to ensure that monitoring and assessment programs accurately and efficiently assess the status and trends of conditions in San Diego Region waters, identify sources of impairment, assess the effectiveness of management actions, and effectively communicate key findings to the public, stakeholders, and decision-makers.

**DISCUSSION**

SmartCover technology consists of an ultrasonic sensor mounted under a manhole cover, along with a computer, power supply, antenna, and satellite modem. The sensor measures the height of the water every few minutes and sends an alarm through the Iridium satellite system if pre-specified parameters are exceeded. Customers are notified of the alarm via email or text message, allowing agency personnel to see the alarm, acknowledge it, and take immediate action to prevent an SSO.

Current clients include the Cities of Escondido, Ramona, Carlsbad, Oceanside, Vista, and El Cajon; the County of San Diego; Camp Pendleton; and the Vallecitos Water District, where SmartCover Systems are being used to detect and respond to SSOs, monitor lift stations, measure hydrogen sulfide levels, and monitor potable water tank levels.

In addition to preventing SSOs, data collected by SmartCover Systems can be used for capital improvement planning and to increase efficiency of maintenance activities, including prioritization of repair locations and identification of optimal cleaning locations.

The San Diego Water Board anticipates recommending to the U.S. Environmental Protection Agency that SmartCover Systems or similar technology be installed in the City of Tijuana within new sanitary sewer lines to help prevent the frequent cross-border sewage spills that have resulted in millions of gallons of sewage flowing into the Tijuana River Estuary and the Pacific Ocean.

**LEGAL CONCERNS**

None.

**PUBLIC NOTICE**

The Meeting Notice and Agenda for today's meeting was posted on the Board's website and sent to those who subscribed to the email list for Board Meetings

**SUPPORTING DOCUMENTS**

None.